

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number
WO 2005/088306 A3

(51) International Patent Classification⁷: C12Q 1/68,
G01N 33/53

(21) International Application Number:
PCT/US2005/007249

(22) International Filing Date: 3 March 2005 (03.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/550,074 4 March 2004 (04.03.2004) US
60/604,470 25 August 2004 (25.08.2004) US

(71) Applicant (for all designated States except US): **WHITE-
HEAD INSTITUTE FOR BIOMEDICAL RESEARCH**
[US/US]; Nine Cambridge Center, Cambridge, MA 02142-
1479 (US).

(72) Inventors; and

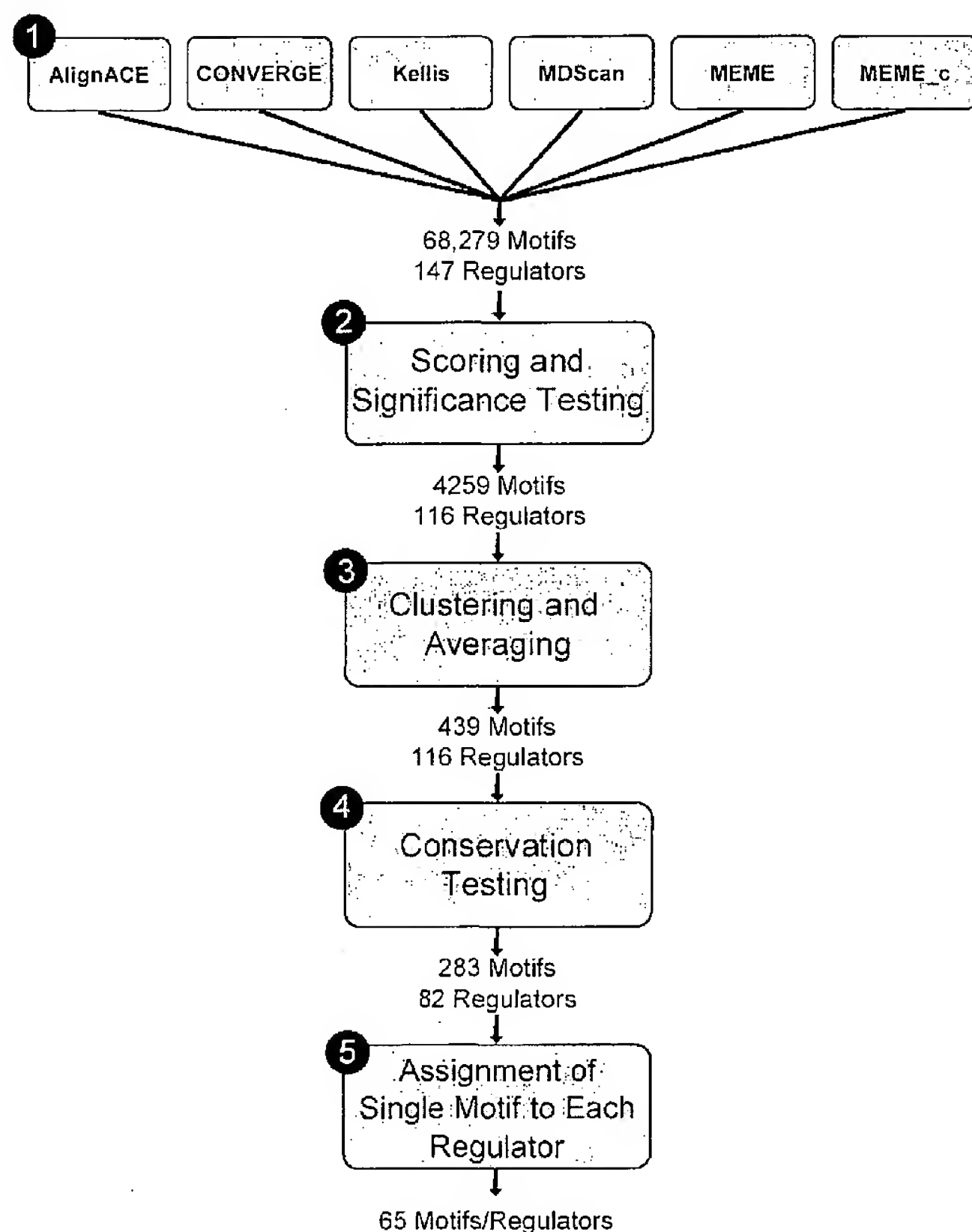
(75) Inventors/Applicants (for US only): **HARBISON,**
Christopher [US/US]; 140 Quincy Avenue, #23, Quincy,
MA 02169 (US). **YOUNG, Richard, A.** [US/US];
216 Highland Street, Weston, MA 02193 (US). **GOR-**
DON, David, B. [US/US]; 130 Concord Avenue, Apt.
4D, Somerville, MA 02143 (US). **FRAENKEL, Ernest**
[US/US]; 28 Surrey Street #1, Cambridge, MA 02138-6018
(US).

(74) Agents: **GRANAHAN, Patricia** et al.; Fish & Neave IP
Group of Ropes & Gray LLP, One International Place,
Boston, MA 02110-2624 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

[Continued on next page]

(54) Title: BIOLOGICALLY-ACTIVE DNA-BINDING SITES AND RELATED METHODS



(57) Abstract: The invention relates to the identification of biologically-active DNA-binding sites to which a protein of interest binds in a cell. The invention also relates to the identification of agents and conditions which alter the biologically-active DNA-binding sites to which a protein binds. One aspect of the invention also provides methods for identifying pathways that are regulated by transcriptional regulators and for modulating the activity of the pathways.



MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

3 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.